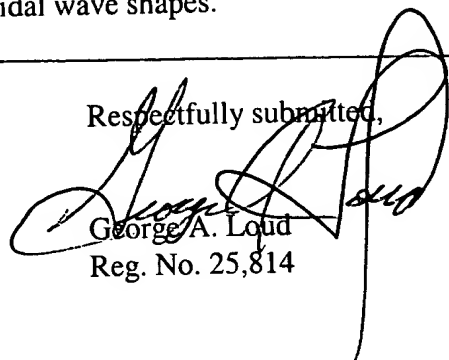


At
concluded

10. (Amended) The optical attenuator as claimed in Claim 9, wherein the refractive index has a profile selected from the group consisting of a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes.

Respectfully submitted,



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1. (Amended) An optical attenuator in the form of a single mode optical fiber comprising a core and having a [characterized in that the] refractive index at a [the] center portion [part] of said [a] core higher than [of a single mode optical fiber is raised as compared to] that of a [the] peripheral portion [part] of the core.

2. (Amended) The optical attenuator as claimed [described] in Claim 1, wherein the distribution of refractive index of said core is [characterized in that the wavelength dependency of the mode field is increased by adopting one] selected from the [a] group consisting of [containing] a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes [as the distribution of refractive index of said core].

3. (Amended) An optical attenuator in the form of a single mode optical fiber comprising a core containing a dopant which attenuates transmitted light more when its wavelength is longer, said dopant being contained only in a [signal mode optical fiber, characterized in that the] dopant area [is] limited to a [at the] center portion [part] of the core, said core having a [and that the] refractive index at the center portion greater than [part of said core is raised as compared to] that of a [the] peripheral portion [part] of said core.

4. (Amended) The optical attenuator as claimed [described] in Claim 3, having a distribution of refractive index of said dopant area in the form of a gradient [characterized in that one] selected from the [a] group consisting of [containing] a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes [is adopted as the distribution of

refractive index of said dopant area].

5. (Amended) An optical attenuator in the form of a single mode optical fiber comprising a core and containing, in a dopant area, dopant which attenuates transmitted light more when its wavelength is longer, wherein [in a signal mode optical fiber, characterized in that] the dopant area is limited to a [the] peripheral part of said [the] core and having a [that the] refractive index at a [the] center part of said core containing no dopant is greater than [raised as compared to] that of the peripheral part of said core.

6. (Amended) The optical attenuator as claimed [described] in Claim 5, wherein the refractive index has a profile [characterized in that one] selected from the [a] group consisting of [containing] a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes [is adopted as the refractive index profile at the center part of said core where no dopant is contained].

7. (Amended) An optical attenuator in the form of a single mode optical fiber comprising a core and containing, in a dopant area, dopant which attenuates transmitted light more when its wavelength is shorter, wherein [in a signal mode optical fiber, characterized in that] the dopant area is limited to a [the] center part of said [the] core and having a [that the] refractive index at the center part of said core greater than [is raised as compared to] that of a [the] peripheral part of said core.

8. (Amended) The optical attenuator as claimed [described] in Claim 7, wherein the refractive index has a profile [characterized in that one] selected from the [a] group consisting of [containing] a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes [is adopted as the distribution of refractive index of said dopant area].

9. (Amended) An optical attenuator in the form of a single mode optical fiber comprising a core and containing, in a dopant area, dopant which attenuates transmitted light more when its wavelength is longer, wherein [into a signal mode optical fiber, characterized in that] the dopant area is limited to a [the] peripheral part of the core and having a [that the] refractive index at the center part of said core greater than [is raised as compared to] that of the peripheral part of said core.

10. (Amended) The optical attenuator as claimed [described] in Claim 9, wherein the refractive index has a profile [characterized in that one] selected from the [a] group consisting of [containing] a graded-index type, parabolic shapes, triangular wave shapes, square wave shapes and trapezoidal wave shapes [is adopted as the refractive index profile at said dopant area].